

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEBRASKA

MARK RANNEY,

Plaintiff,

vs.

UNION PACIFIC RAILROAD COMPANY,

Defendant.

8:18CV59

MEMORANDUM AND ORDER

This matter is before the Court on defendant Union Pacific Railroad Company's ("U.P." or "the Railroad") motion in limine, [Filing No. 37](#), and motion for summary judgment, [Filing No. 39](#). This is an action under the Federal Employers' Liability Act ("FELA"), [45 U.S.C. § 51](#) *et seq.* The plaintiff first worked as a switchman and later a locomotive engineer at U.P., and/or its predecessors-in-interest. He alleges that while he was employed at U.P., he was negligently exposed to diesel engine exhaust and herbicides that contributed to follicular lymphoma, a form of non-Hodgkin's lymphoma.

I. BACKGROUND

U.P.'s motion for summary judgment is based on the contention that summary judgment is warranted if the Court excludes the testimony of either of the plaintiff's expert witnesses. It argues that without the expert testimony, Ranney cannot establish medical causation and will be unable to prove that the Railroad is liable under the FELA.

U.P. moves in limine to exclude the testimony of Dr. Ernest Chiodo and Dr. Hernando Perez, under [Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579 \(1993\)](#). U.P. does not challenge the experts' qualifications. It contends, however, that Dr. Chiodo's testimony on general causation is not supported by scientific literature or a reliable

methodology, arguing that the studies on which he relies do not demonstrate a causal link between diesel exhaust, benzene, or herbicides, and follicular lymphoma. U.P. also argues Dr. Perez did not employ a scientifically reliable method to determine the levels of the plaintiff's exposure. It argues that Dr. Perez's opinion relies on unfounded assumptions and on studies that are not representative of the plaintiff's exposure. In support of its *Daubert* motion, U.P. submits the declaration of its own expert. See [Filing No. 41-14](#), Declaration of Dr. Christopher M. Long.

The plaintiff argues that the defendant's *Daubert* challenge goes to the weight, not the admissibility, of the evidence.

II. FACTS

As relevant herein, and for purposes of the motion for summary judgment, the parties agree to the following facts. Plaintiff was employed with Union Pacific and its predecessor, the Chicago & Northwestern Railroad ("CNW"), from 1970 to 2014. Plaintiff was diagnosed with follicular lymphoma in September 2014. Plaintiff sued Union Pacific under FELA, alleging that his follicular lymphoma was caused by exposure to "various toxic substances" during his railroad employment. Plaintiff designated Dr. Chiodo to testify "as to the nature and extent of the Plaintiff's injuries as well as their causation (general/specific)." [Filing No. 41-3](#), Ex. 3, Plaintiff's Rule 26 Expert Disclosures at 1. Dr. Perez was designated to testify, generally, as to notice and foreseeability of the hazards associated with the plaintiff's employment including exposure to carcinogens, and to the railroad industry's knowledge of the hazards of exposure to toxins. *Id.* Both experts' opinions are limited to alleged exposures to diesel exhaust, benzene, and herbicides.

The record shows Dr. Perez has a Ph.D. in industrial hygiene from Purdue University and a Master of Public Health degree in environmental and occupational health from Emory University. *Id.*, Ex. 1, Dr. Perez Curriculum Vitae at 1. He is certified in the comprehensive practice of industrial hygiene by the American Board of Industrial Hygiene and in the practice of safety by the Board of Certified Safety Professionals. *Filing No. 45-1*, Exhibit (“Ex.”) 2, Dr. Perez Report. *Id.* He has been employed as Lead Industrial Hygienist and Environmental Hygiene Program Manager for United States Citizenship and Immigration Services in the United States Department of Homeland Security since 2015. *Id.* at 2. In that capacity, he is responsible for coordination and performance of industrial hygiene activities at all USCIS facilities across the United States. *Id.* He was employed as full-time faculty at the Drexel University School of Public Health from 2004 to 2014 and as Director of the Industrial Hygiene Consulting Service at the School from 2006 to 2014. *Id.*

In this case, Dr. Perez was asked to offer opinions on Ranney’s working conditions. *Id.* Dr. Perez interviewed Ranney and reviewed Ranney’s deposition, pleadings, medical records, personnel records and materials supplied by plaintiff’s counsel. *Filing No. 45-1*, Ex. 3, Deposition of Hernando Perez, Ph.D. (“Dr. Perez Dep.”) at 8-15. He also reviewed various journal articles, standard textbooks, and information from OSHA, NIOSH, EPA, ATSDR, MSHA, National Cancer Institute (NCI), National Institute of Environmental Health Sciences (NIEHS), and International Agency for Research on Cancer (IARC) and diesel testing data provided by U.P. *Id.*, Ex. 2, Dr. Perez Report at 16-18; Ex. 3, Dr. Perez Dep. at 6-7.

He testified he was able to estimate a range of the intensity of Ranney's exposure by doing a historical reconstruction from the information provided to him and a review of the literature. *Id.* at 54-55, 88-91. He performed a historical reconstruction by "using determinants of exposures established data, an understanding of the work tasks and of similar work tasks, similar environments in a level that's present to those and we take all the information available to us and we use our expertise as industrial hygienists to develop an exposure estimate." [Filing No. 45-1](#), Ex. 3, Dr. Perez Dep. at 148-49; see *id.* at 54-55, 83, 88-91. Dr. Perez quantifies the "estimated elemental carbon exposure concentration ranges for high, intermediate, and low exposure categories" in his report. [Filing No. 45-1](#), Ex. 2, Dr. Perez Report at 3. The ranges are derived from "Occupational Exposure to Diesel Engine Exhaust: A Literature Review" done by Anjoeka Pronk, *et al.* *Id.* at 8, 11, 16 n.1. Dr. Perez discussed his reliance on the Pronk paper as follows:

With Mr. Ranney, we were able to identify the conditions under which he worked based on his description, based on the knowledge of what we know, what we understand about what we know about entrainment into locomotives, what we know on dispersal and outdoor environmental lighting sources to bring all that together and within the context of the Pronk paper to use that as a guide in a way, we're able to perform a strong assessment of what his exposure would have been to diesel exhaust.

[Filing No. 45-1](#), Ex. 3, Dr. Perez Dep. at 55. Dr. Perez explained he uses the Pronk paper as a guide to assign elemental carbon ranges to the plaintiff's exposures based on determinants of exposures, not to ascertain specific levels of exposures. *Id.*; see *also* [Filing No. 45-1](#), Ex. 2, Dr. Perez Report at 3.

Dr. Perez states that Ranney experienced chronic exposure to diesel exhaust during his entire forty-three-year career as a switchman and locomotive engineer for

Union Pacific and his average exposure while performing duties for Union Pacific were consistent with those in the low to intermediate range of exposed occupations. [Filing No. 45-1](#), Ex. 2, Dr. Perez Report at 8. He found Ranney's exposures consistent with either "low range," "intermediate range," "low range with frequent excursions into intermediate range" or "ambient background concentrations" during various points of Ranney's employment with the Railroad. *Id.* He testified that his conclusions were consistent with U.P.'s own air monitoring data. [Filing No. 45-1](#), Ex. 3, Dr. Perez Dep. at 68-69.

Based on his evaluation and his education and experience in the field, Dr. Perez states that U.P. failed to provide a reasonably safe place to work in failing to provide air monitoring or otherwise determine Ranney's level of exposure to diesel exhaust; failing to provide Ranney with appropriate personal protective equipment; failing to implement any administrative or engineering controls to reduce or prevent diesel exhaust or herbicide exposure; and failing to provide adequate warnings, training, and information about the hazards of diesel exhaust or herbicide exposure. [Filing No. 45-1](#), Ex. 2, Dr. Perez Report at 15. He further opines that U.P. failed to comply with the OSHA Hazard communication Standard, and the OSHA General Duty Clause, OSHA Act Section 5(a)(1). *Id.* Dr. Perez concluded that U.P.'s actions fell beneath a reasonable standard of care. *Id.*

The record shows that Dr. Ernest Chiodo received an M.D. degree and a J.D. degree from Wayne State University. [Filing No. 45-1](#), Dr. Chiodo Curriculum Vitae at 2. He also has a master's degree in Public Health from Harvard University School of Public Health, a master's degree in Biomedical Engineering from Wayne State

University College of Engineering and School of Medicine, a Master of Science degree in Threat Response Management from the University of Chicago, a Master of Science degree in Occupational and Environmental Health Sciences with a specialization in Industrial Toxicology from Wayne State University. *Id.* at 1-2. He has also obtained an M.B.A. from the University of Chicago, and a Master of Science in Evidence-Based Health Care from the University of Oxford. *Id.* Dr. Chiodo is board certified in internal medicine, preventative medicine in occupational medicine, preventative medicine in public health, and is a toxicologist and certified industrial hygienist. *Id.* at 5. He is licensed to practice as a physician in Michigan, Illinois, Florida, and New York. *Id.* at 4. Dr. Chiodo had numerous professorships and faculty appointments at Wayne State University, Wayne State University School of Medicine, Loyola University Chicago Law School, and John Marshall Law School. *Id.* at 6.

Dr. Chiodo reviewed the complaint, responses to interrogatories and requests for production of documents, the plaintiff's deposition, medical bills, medical records, employee records, and an HR report. See [Filing No. 45-1](#), Ex. 6, Dr. Chiodo Report at 2-3. Dr. Chiodo testified that he relied on Dr. Perez's industrial hygiene analysis to form his opinion. [Filing No. 45-1](#), Ex. 7, Deposition of Dr. Ernest Chiodo ("Dr. Chiodo Dep.") at 14, 23-30. Dr. Chiodo also relied upon peer-reviewed literature in formulating his expert opinion that longstanding and continuous exposure to diesel exhaust, its subcomponent benzene, and herbicides in a work environment could have contributed to a non-Hodgkin's lymphoma diagnosis. [Filing No. 45-1](#), Ex. 6, Dr. Chiodo Expert Report at 3-8.

Dr. Chiodo described his methodology as consistent with that described in the Federal Judicial Center's reference manual.¹ [Filing No. 45-1](#), Dr. Chiodo Dep. at 13-15. He testified he considered Ranney's exposures and performed a differential diagnosis in rendering his opinion. [Id.](#) at 15. In his report, he states, "it is my opinion to a reasonable degree of medical and scientific certainty that the exposures experienced by Mr. Mark Ranney during the course of his railroad employment were a significant contributing factor in his development of non-Hodgkin's lymphoma." [Filing No. 45-1](#), Ex. 6, Dr. Chiodo Report at 9; [id.](#), Ex. 7, Dr. Chiodo Dep. at 33. Also, Dr. Chiodo "ruled out" any type of immune deficiency such as AIDS as a contributing factor to Mr. Ranney's form of non-Hodgkin's lymphoma. [Id.](#) at 79. He testified that Ranney's exposure to diesel exhaust as a locomotive engineer was "a regular ongoing exposure, and it's something where he can smell it. It's something that's a constant presence to him." [Id.](#) at 27.

II. LAW

A. Summary Judgment

Summary judgment is appropriate when, viewing the facts and inferences in the light most favorable to the nonmoving party, "the pleadings, the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law." [Fed. R. Civ. P. 56\(c\)](#); see also [Celotex Corp. v. Catrett](#), 477 U.S. 317, 322 (1986). "The movant 'bears the initial responsibility of informing the district court of the basis for its motion, and must identify 'those portions of [the record] . . . which it believes

¹ Federal Judicial Center, *Reference Manual on Scientific Evidence* ("Reference Manual") at 375-76 (2d ed. 2000).

demonstrate the absence of a genuine issue of material fact.” *Torgerson v. City of Rochester*, 643 F.3d 1031, 1042, (8th Cir. 2011) (*en banc*) (quoting *Celotex*, 477 U.S. at 323). If the movant does so, “the nonmovant must respond by submitting evidentiary materials that set out ‘specific facts showing that there is a genuine issue for trial.’” *Id.* (quoting *Celotex*, 477 U.S. at 324).

The evidence must be viewed in the light most favorable to the nonmoving party, giving the nonmoving party the benefit of all reasonable inferences. *Kenney v. Swift Transp., Inc.*, 347 F.3d 1041, 1044 (8th Cir. 2003). If “reasonable minds could differ as to the import of the evidence,” summary judgment should not be granted. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 251 (1986). “In ruling on a motion for summary judgment, a court must not weigh evidence or make credibility determinations.” *Id.*

B. Expert Testimony

Federal Rule of Evidence 702 governs the admissibility of expert testimony and requires that: “(1) the evidence must be based on scientific, technical or other specialized knowledge that is useful to the finder of fact in deciding the ultimate issue of fact; (2) the witness must have sufficient expertise to assist the trier of fact; and (3) the evidence must be reliable or trustworthy.” *Kudabeck v. Kroger Co.*, 338 F.3d 856, 859 (8th Cir. 2003). When faced with a proffer of expert testimony, trial judges are charged with the “gatekeeping” responsibility of ensuring that all expert evidence admitted is both relevant and reliable. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147 (1999); *Daubert*, 509 U.S. at 589. The proponent of expert testimony bears the burden of providing admissibility by a preponderance of the evidence. *Lauzon v. Senco Prods.*, 270 F.3d 681, 686 (8th Cir. 2001).

Testimony is relevant if it is “sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute.” *Daubert*, 509 U.S. at 591. Expert testimony assists the trier of fact when it provides information beyond the common knowledge of the trier of fact. *Kudabeck*, 338 F.3d at 860.

To satisfy the reliability requirement, the party offering the expert testimony must show by a preponderance of the evidence “that the methodology underlying [the expert’s] conclusions is scientifically valid.” *Barrett v. Rhodia, Inc.*, 606 F.3d 975, 980 (8th Cir. 2010) (citations omitted). In making the reliability determination, the court may consider:

- (1) whether the theory or technique can be or has been tested; (2) whether the theory or technique has been subjected to peer review or publication; (3) whether the theory or technique has a known or potential error rate and standards controlling the technique’s operations; and (4) whether the theory or technique is generally accepted in the scientific community.

Russell v. Whirlpool Corp., 702 F.3d 450, 456 (8th Cir. 2012). Additional factors to consider include: “whether the expertise was developed for litigation or naturally flowed from the expert’s research; whether the proposed expert ruled out other alternative explanations; and whether the proposed expert sufficiently connected the proposed testimony with the facts of the case.” *Polski v. Quigley Corp.*, 538 F.3d 836, 839 (8th Cir. 2008) (quoting *Sappington v. Skyjack, Inc.*, 512 F.3d 440, 449 (8th Cir. 2008)).

“This evidentiary inquiry is meant to be flexible and fact specific, and a court should use, adapt, or reject” these factors as the particular case demands. *Russell v. Whirlpool*, 702 F.3d at 456 (citation omitted).

When making the reliability inquiry, the court should focus on “principles and methodology, not on the conclusions that they generate.” *Kuhn v. Wyeth, Inc.*, 686 F.3d 618, 625 (8th Cir. 2012). However, “conclusions and methodology are not entirely distinct from one another. Trained experts commonly extrapolate from existing data.” *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

“When the *application* of a scientific methodology is challenged as unreliable under *Daubert* and the methodology itself is sufficiently reliable, outright exclusion of the evidence is warranted only if the methodology ‘was so altered by a deficient application as to skew the methodology itself.’” *United States v. Gipson*, 383 F.3d 689, 697 (8th Cir. 2004) (emphasis in original) (quoting *United States v. Martinez*, 3 F.3d 1191, 1198 (8th Cir. 1993)). Generally, deficiencies in application go to the weight of the evidence, not its admissibility. See *id.* “‘As a general rule, the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party to examine the factual basis for the opinion in cross-examination.’” *Bonner v. ISP Techs., Inc.*, 259 F.3d 924, 929 (8th Cir. 2001) (quoting *Hose v. Chicago Nw. Transp. Co.*, 70 F.3d 968, 976 (8th Cir. 1995)).

“[C]ases are legion” in the Eighth Circuit that “call for the liberal admission of expert testimony.” *Johnson v. Mead Johnson & Co., LLC*, 754 F.3d 557, 562 (8th Cir. 2014). “As long as the expert’s scientific testimony rests upon ‘good grounds, based on what is known’ it should be tested by the adversary process with competing expert

testimony and cross-examination, rather than excluded by the court at the outset.” *Id.* (quoting *Daubert*, 509 U.S. at 590). “Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Daubert*, 509 U.S. at 596.

District courts are “not to weigh or assess the correctness of competing expert opinions.” *Id.* The jury, not the trial court, should be the one to ‘decide among the conflicting views of different experts.’” *Kumho Tire Co.*, 526 U.S. at 153. Medical experts often disagree on diagnosis and causation and questions of conflicting evidence must be left for the jury's determination. *Hose*, 70 F.3d at 976.

C. The FELA

Railroads are liable in damages for an employee's “injury or death resulting in whole or in part from the Railroad's negligence.” 45 U.S.C. § 51. Appraising negligence under FELA “turns on principles of common law . . . , subject to such qualifications [that] Congress” introduces. *Consolidated Rail Corp. v. Gottshall*, 512 U.S. 532, 543-44 (1994) (noting the qualifications are the modification or abrogation of several common-law defenses to liability, including contributory negligence and assumption of risk). The FELA is to be liberally construed, but it is not a workers' compensation statute, and the basis of liability is “negligence, not the fact that injuries occur.” *Id.* at 543.

The FELA imposes upon employers a continuous duty to provide a reasonably safe place to work. *Cowden v. BNSF Ry. Co.*, 690 F.3d 884, 889 (8th Cir. 2012). The railroad's duty to provide a safe workplace is a duty of reasonable care. *CSX Transp., Inc. v. McBride*, 564 U.S. 685, 703 (2011). However, “a relaxed standard of causation

applies under FELA.” *Gottshall*, 512 U.S. at 543; see *Holloway v. Union Pac. R.R. Co.*, 762 F. App'x 350, 352 (8th Cir. 2019). The test is simply whether the railroad's negligence played a part—no matter how small—in bringing about the injury. *McBride*, 564 U.S. at 705; see also *Paul v. Mo. Pac. R.R. Co.*, 963 F.2d 1058, 1061 (8th Cir. 1992)(stating that “[u]nder FELA, the plaintiff carries only a slight burden on causation.”). In FELA cases, the negligence of the defendant need not be the sole cause or whole cause of the plaintiff's injuries.² *Claar v. Burlington N. R.R. Co.*, 29 F.3d 499, 503 (9th Cir. 1994).

Despite the lower causation standard under FELA, a plaintiff must still demonstrate some causal connection between a defendant's negligence and his or her injuries. *Brooks v. Union Pac. R.R. Co.*, 620 F.3d 896, 899 (8th Cir. 2010). In order to avoid summary judgment, a FELA plaintiff is required to produce admissible evidence that the railroad's negligence played a part in causing his alleged injury. *Id.* If an injury has “no obvious origin, ‘expert testimony is necessary to establish even that small quantum of causation required by FELA.’” *Brooks*, 620 F.3d at 899 (quoting *Claar*, 29 F.3d at 504); see also *Mayhew v. Bell S.S. Co.*, 917 F.2d 961, 963 (6th Cir. 1990) (“[A]lthough a [FELA] plaintiff need not make a showing that the employer's negligence was the sole cause, there must be a sufficient showing (i.e. more than a possibility) that a causal relation existed.”).

“The standard of causation under FELA and the standards for admission of expert testimony under the Federal Rules of Evidence are distinct issues and do not

² In contrast, “[t]o establish causation in a common law negligence action, a plaintiff generally must show that the defendant's conduct was a ‘substantial factor in bringing about the harm.’” *Tufariello v. Long Island R.R. Co.*, 458 F.3d 80, 87 (2d Cir. 2006) (quoting Restatement 2d of Torts § 431(a)).

affect one another.” *Claar*, 29 F.3d at 503. *Daubert*'s standards for determining the admissibility of expert testimony apply regardless of whether the plaintiff's burden to prove causation is reduced. *Wills v. Amerada Hess Corp.*, 379 F.3d 32, 47 (2d Cir. 2004) (involving Jones Act and stating that “the standards for determining the reliability and credibility of expert testimony are not altered merely because the burden of proof is relaxed”); see also *Taylor v. Consol. Rail Corp.*, No. 96-3579, 114 F.3d 1189 (Table), 1997 WL 321142, at *6–7 (6th Cir. June 11, 1997) (noting it is well established that the admissibility of expert testimony is controlled by *Daubert*, even in FELA cases); *Hose*, 70 F.3d at 976 (applying *Daubert* in an FELA case).³

A differential diagnosis is “an alternative method of establishing causation,” one which may be utilized where the particular facts of the case do not lend themselves to quantitative analysis.⁴ *Hardyman v. Norfolk & W. Ry. Co.*, 243 F.3d 255, 261 (6th Cir. 2001) (rejecting defendant railroad's argument that the only way the plaintiff could establish causation would be with the proffer of a known “dose/response relationship” or “threshold phenomenon[.]”). “In performing a differential diagnosis, a physician begins by ‘ruling in’ all scientifically plausible causes of the plaintiff's injury. The physician then ‘rules out’ the least plausible causes of injury until the most likely cause remains.”

Glastetter v. Novartis Pharm. Corp., 252 F.3d 986, 989 (8th Cir. 2001) (involving state-

³ That is not to say that the lower standard of proof has no effect on a *Daubert* inquiry. *Daubert*'s relevancy inquiry (that is, whether the evidence assists the trier of fact) may be affected by the reduced statutory burden of proof. *Wills*, 379 F.3d at 47; see *Daubert v. Merrell Dow Pharms., Inc.*, 43 F.3d 1311, 1321 (9th Cir. 1995) (on remand from the Supreme Court) (stating that where the pertinent inquiry is whether the proffered expert testimony “will assist the trier of fact” in determining causation, the court looks to the governing substantive standard).

⁴ Differential diagnosis refers to a physician's “determination of which one of two or more diseases or conditions a patient is suffering from, by systematically comparing and contrasting their clinical findings.” *King v. Burlington N. Santa Fe Ry. Co.*, 762 N.W.2d 24, 49 (Neb. 2009). “In contrast, etiology refers to determining the causes of a disease or disorder.” *Id.* at 49-50.

law products liability action and finding FDA decision to remove a drug from marketplace was “unreliable proof of medical causation . . . because the FDA employs a reduced standard (vis-à-vis tort liability)” of proof on causation).

In the Eighth Circuit, differential diagnoses in general pass muster under the four considerations identified in *Daubert*. [Johnson](#), 754 F.3d at 564 (agreeing with other circuits that a differential diagnosis is a tested methodology, has been subjected to peer review/publication, does not frequently lead to incorrect results, and is generally accepted in the medical community). In fact, the Eighth Circuit has “termed an opinion [based on a differential diagnosis] ‘presumptively admissible,’ noting that a district court may not exclude such expert testimony unless the diagnoses are ‘scientifically invalid.’” *Id.* Also, the Eighth Circuit has “consistently ruled that experts are not required to rule out all possible causes when performing the differential etiology analysis.” *Id.* at 563. In the context of the FELA, a plaintiff need not necessarily prove the levels of a toxin to which he or she was exposed.⁵ See [Hardyman](#), 243 F.3d at 262-66 (reversing trial court's ruling that plaintiff could establish causation only by showing a “dose/response

⁵ In contrast, under general negligence principles, in a toxic tort case, “at a minimum . . . there must be evidence from which the factfinder can conclude that the plaintiff was exposed to levels of [the toxic agent at issue] that are known to cause the kind of harm that the plaintiff claims to have suffered.” [Mattis v. Carlon Elec. Prods.](#), 295 F.3d 856, 860 (8th Cir. 2002) (addressing causation in the context ordinary negligence and a proximate cause standard). To prove causation in a toxic tort case, a plaintiff must show both that the alleged toxin is capable of causing injuries like that suffered by the plaintiff in persons subjected to the same level of exposure as the plaintiff, and that the toxin was the cause of the plaintiff's injury. [Wright v. Willamette Indus.](#), 91 F.3d 1105, 1106 (8th Cir. 1996) (under Arkansas law, applying a proximate cause standard that required evidence from which a reasonable person could conclude that a defendant's emission had *probably caused* harm in order to recover). However, even under common-law negligence standards, a plaintiff does not need to produce a “mathematically precise table equating levels of exposure with levels of harm” to show that he was exposed to a toxic level of a chemical, but must only present “evidence from which a reasonable person could conclude that his exposure *probably caused* his injuries.” [Bonner](#), 259 F.3d at 928 (emphasis added). “[W]hile precise information concerning the exposure necessary to cause specific harm to humans and exact details pertaining to the plaintiff's exposure are beneficial, [it must be recognized that] such evidence is not always available, or necessary, . . . and need not invariably provide the basis for an expert's opinion on causation.” [Westberry v. Gislaved Gummi AB](#), 178 F.3d 257, 264 (4th Cir. 1999) (involving a strict liability, breach of warranty, and negligence action).

relationship” between exposure levels and risk of disease and finding that an expert need not possess specific dosage information in order to testify about causation in an FELA case); *Harbin v. Burlington N. R.R. Co.*, 921 F.2d 129, 132 (7th Cir. 1990) (finding a plaintiff need not identify the specific composition and density of soot present in his work environment to survive a summary judgment—although “expert testimony documenting the hazards posed by the presence of so many parts per million of soot in the air would certainly enhance [the plaintiff’s] case, it is not essential under the regime of the [FELA].”); *Higgins v. Consol. Rail Corp.*, No. 1:06-CV-689 GLS/DRH, 2008 WL 5054224, at *4 (N.D.N.Y. Nov. 21, 2008) (finding an issue of fact as to causation even if expert testimony had been excluded because due to the slight burden of proof in FELA actions, and stating that a jury may make inferences in an FELA case that it otherwise could not); *Sunnycalb v. CSX Transp., Inc.*, 926 F. Supp. 2d 988, 995-96 (S.D. Ohio 2013) (finding that the plaintiff’s inability to establish a precise level of chemical exposure did not bar recovery under FELA—the evidence was sufficient for the jury to draw the reasonable inference that CSX’s negligence played a part in plaintiff’s injuries); *Payne v. CSX Transp., Inc.*, 467 S.W.3d 413, 457 (Tenn. 2015) (“[S]tated simply, the Plaintiff’s experts were not required to establish ‘a dose exposure above a certain amount’ before they could testify about causation.”); and *Russell v. Ill. Cent. R.R.*, No. W2013-02453-COA-R3-CV, 2015 WL 4039982 (rejecting defendant railroad’s contention that an expert’s opinions were not reliable because the differential diagnoses on which they were based “did not consider the dose, frequency or duration” of the plaintiff’s exposure to carcinogens at work).

III. DISCUSSION

The Court first finds the Railroad's motion to exclude the testimony of Drs. Chiodo and Perez should be denied. Both experts are clearly qualified to render their opinions and their opinions are relevant and reliable enough to pass muster under Rule 702 and *Daubert*.

The Court rejects the defendant's contention that Dr. Chiodo's testimony is not supported by scientific literature or a reliable methodology. To the contrary, Dr. Chiodo testified that he relied on peer-reviewed studies of exposure involving railroad workers and similar occupations. He based his testimony on materials furnished by the plaintiff's attorney, a review of the literature, review of Dr. Perez's reports in this and other cases, an interview with the plaintiff, review of the plaintiff's deposition, review of the plaintiff's medical records and employment records, and on his extensive knowledge, experience, and expertise. Based on that evidence, he testified that there was no safe threshold of exposure to carcinogens and that Ranney's exposure to diesel exhaust was a "common just daily constant portion" of his employment and exposure was frequent over his forty-plus years of employment on the railroad. Dr. Chiodo's review of literature corroborated his opinion. He properly extrapolated his opinion from the facts and literature. He performed a differential diagnosis, which is a tested methodology that has been subjected to peer review/publication, has been shown not to frequently lead to incorrect results, and is accepted in the medical community. He testified to a reasonable degree of medical certainty that Ranney's exposure to benzene in diesel exhaust the course of his employment contributed to his follicular non-Hodgkin's lymphoma. Notably, Dr. Chiodo, who is also an attorney, testified that in an FELA case,

he is not required to rule out other causes. [Filing No. 45-1](#) at 81. The Court agrees and finds his testimony is sufficient with respect to general causation.

Dr. Perez's testimony is similarly sufficient to withstand a *Daubert* challenge. See *Lemberger v. Union Pacific Railroad Co.*, No. 18cv64, No. 18-cv-64, Memorandum and Order at 19-20 (D. Neb. May 29, 2010). Both experts' testimony will assist the trier of fact in determining the requisite causal connection between the toxins at issue and the injury—that U.P.'s allegedly negligent conduct in exposing Ranney to diesel exhaust and herbicides over more than forty years of employment—played a part in Ranney's cancer. The lack of quantitative data is not fatal to the admissibility of the experts' opinions since the lack of such data is typical in epidemiological cases. The alleged shortcomings in the experts' evaluations are properly the subject of cross-examination and do not call for exclusion of the testimony.

U.P. mistakenly relies on caselaw involving toxic tort actions, without recognizing that this case is a toxic tort case under the FELA. The defendant's position would have more force if the case required a showing of proximate cause. If the plaintiff had to prove the exposure proximately caused the injury, the experts' testimony would be less relevant and would not necessarily be sufficiently tied to the facts of the case to assist the jury. Under the FELA, however, the plaintiff need not demonstrate the railroad's conduct was the proximate cause, but only that it played a part—no matter how small—in the injury.

The Court finds the experts' opinions on causation have a factual basis and are supported by accepted scientific theories. The record shows the experts based their opinions on medical records, peer-reviewed studies, and evidence of exposures that

covered a long period of time. They also relied on their education and experience in the fields of statistics, toxicology, carcinogenesis, and oncology. The defendant's criticisms go to the weight, rather than the admissibility of the testimony.

The defendant relies in part on the declarations of its experts to discredit Drs. Chiodo and Perez. The defendant's showing presents a classic battle of the experts. The jury should decide among the conflicting views of different experts. The Court would invade the province of the jury if it were to credit the testimony of the Railroad's experts over the plaintiff's experts.

Moreover, the Court finds the defendant's reliance on the exclusion of Dr. Chiodo's testimony in other cases in this district is unavailing. See [Harder v. Union Pac. R.R. Co.](#), No. 8:18CV58, 2020 WL 469880, at *1 (D. Neb. Jan. 29, 2020) (excluding Dr. Chiodo's testimony because he was unaware of the plaintiff's length of exposure, concentration of exposure, and the atmosphere of exposure), *appeal docketed*, No. 20-1417 (8th Cir. Mar. 2, 2020); [West v. Union Pac. R.R. Co.](#), No. 8:17CV36, 2020 WL 531994, at *5 (D. Neb. Feb. 3, 2020) (excluding the causation testimony of Dr. Chiodo as speculation based only on the job the plaintiff held, without reliance on the testimony of an industrial hygiene expert or other facts or data), *appeal docketed*, No. 20-1422 (8th Cir. Mar. 4, 2020). First, this Court is not bound by those decisions, they involved different facts and evidence, and they have been appealed.⁶ Also, Dr. Chiodo's opinion

⁶ Other similar cases in this district involved different experts, different diseases, different jobs, and different considerations relevant to the differential etiology analysis. See e.g., [Byrd v. Union Pac. R.R. Co.](#), No. 8:18CV36, 2020 WL 1848496, at *6 (D. Neb. Apr. 13, 2020) (excluding expert testimony on liability for failure to link the plaintiff's exposure to the plaintiff's lung cancer and COPD without knowing exposure levels and failing to adequately rule out the plaintiff's two-pack-a-day, forty-year, smoking history as the sole cause of the lung cancer), *appeal docketed*, No. 20-1959 (8th Cir. May 12, 2020); [McLaughlin v. BNSF Ry. Co.](#), No. 4:18-CV-3047, 2020 WL 641729, at *6 (D. Neb. Feb. 11, 2020) (expert causation testimony excluded because the expert failed to adequately rule out thirty-year, pack-and-a-

has been admitted in an FELA case in another jurisdiction. See [Filing No. 45-1](#), Ex. 8, *Minic v. BNSF Ry. Co.*, No.18-01931, [Filing No. 45](#), Courtroom Minutes (D. Colo. Feb. 26, 2020).

V. CONCLUSION

In conclusion, the Court's review of the record shows that the scientific testimony at issue rests on "appropriate validation—i.e., 'good grounds', based on what is known," [Daubert](#), 509 U.S. 590, and "should be tested by the adversary process with competing expert testimony and cross-examination, rather than excluded by the court at the outset." [Johnson](#), 754 F.3d at 562. The experts' opinion are not so "fundamentally unsupported that [the testimony] can offer no assistance to the jury." [Bonner](#), 259 F.3d at 929–30.

The Court finds the methodology employed by the plaintiff's experts is scientifically valid, can properly be applied to the facts of this case, and is reliable enough to assist the trier of fact. This is not the sort of junk science that *Daubert* addresses. Even if there are grounds for some alternative conclusion or flaws in the experts' methods, the expert testimony at issue is within "the range where experts might reasonably differ," and the jury, not the trial court, should be the one to "decide among the conflicting views of different experts." [Kumho Tire](#), 526 U.S. at 153.

With the admission of the expert testimony, there is an issue of fact for the jury on the exposures and whether the exposures contributed to the plaintiff's tonsil cancer. U.P. has not shown as a matter of law that the plaintiff cannot prevail in establishing that

half-a-day cigarette smoking as the sole cause of the plaintiff's lung cancer), *appeal docketed*, No. 20-1494 (8th Cir. Mar. 10, 2020).

U.P.'s negligence "played a part" in Langrell's tonsil cancer. Accordingly, the Court finds the defendant's motion for summary judgment should also be denied.

IT IS ORDERED:

1. The defendant's motion in limine ([Filing No. 37](#)) is denied.
2. The defendant's motion for summary judgment ([Filing No. 39](#)) is denied.

Dated this 5th day of June, 2020.

BY THE COURT:

s/ Joseph F. Bataillon
Senior United States District Judge